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Attorney No: 101769-311

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS : MARC HUSEMANN
SERIAL NO. : 10/533,831
FILED : NOVEMBER 10, 2005
FOR : POLY(METH)ACRYLATE-BASED PRESSURE-SENSITIVE
ADHESIVE
GROUP ART UNIT : 1794
EXAMINER : ANISH P. DESAI

DECLARATION UNDER 37 C.F.R. § 1.132

I, Marc Husemann, a citizen of Germany, residing at Strehlowweg 48, 22605 Hamburg hereby declare and state:

I have a degree in Ph.D. in Chemistry, which was conferred upon me by University of Marburg (Germany) in 1996.

I have been employed by tesa SE and I have had a total of 12 years of work and research experience in polymer chemistry as R&D Manager.

I am one of the named inventors in the above-captioned patent application.

I submit this declaration in support of the above-referenced application.

1. The present invention is directed to a polyacrylate-based pressure sensitive adhesive comprising a polymer formed from a monomer mixture comprising 60-85 wt.% of acrylic and/or methacrylic esters having the formula $\text{CH}_2 = \text{C}(\text{R}_1)(\text{COOR}_2)$, where $\text{R}_1 = \text{H}$ or CH_3 and R_2 is a linear or branched alkyl radical having 1 to 14 carbon atoms and 10-40 wt. % isobornyl acrylate units. The adhesive also contains, as a crosslinking agent, aluminum (III) acetylacetonate.

2. Due to the relatively high amount of isobornyl acrylate units, the polymer is

apolar.


3. The crosslinking agent, aluminum (III) acetylacetonate, is polar.
4. It is understood by those of ordinary skill in the art that polar polymers should be crosslinked with polar crosslinking agents. Alternatively, apolar polymers should be crosslinked with apolar crosslinking agents. This is because molecules of similar polarity achieve better miscibility with each other when mixed. In a crosslinking reaction, the more miscible the components, the more homogeneous the crosslinking. Good miscibility is essential to the crosslinking reaction.
5. Due to the differences in polarity, it was expected that a combination of the claimed monomer combination and aluminum(III)acetylacetonate could not be crosslinked homogeneously and would not be suitable as a pressure sensitive adhesive. Surprisingly, however, the adhesive did achieve a sufficiently homogenous crosslink.
6. Furthermore, at the time of the invention, a person of ordinary skill in the art would have expected the combination of an apolar polymer and a polar crosslinking agent, to exhibit an increase in the wetting surface of the adhesive. An increase in the wetting surface would result in an adhesive having permanent adhesion, and not suitable for removability.
7. It was therefore surprising that the presently claimed adhesive exhibited low wetting behavior, and was able to be easily removed from a surface.

All statements made herein on knowledge are true, and all statements made on information and belief are believed to be true; and further these statements were made with the knowledge that willful false statement and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code,

and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date:

5-31-2010


[Name of Declarant]